

A NEW NAME FOR THE GENUS QUIPPELACHNUS OESTLUND
(APHIDAE, HOMOPTERA).¹BY A. A. GRANOVSKY, *University of Wisconsin.*

In the study of aphids belonging to the tribe Callipterini one meets with a number of difficulties and apparent confusion as to the correct generic position of several species, as well as to the proper definition of certain genera. In 1920 Baker (2), in his generic classification of aphids, redefined with synonymy all of the aphid genera then known to him and listed the type species of each genus, thus rendering immeasurable aid to aphidologists. Since that time several new aphid genera have been erected and among them is *Quippelachnus* proposed by Oestlund (7) with the type species *Euceraphis gillettei* Davidson. He based his genus on the relative length of unguis as compared with the base of the sixth antennal segment, the presence of radial sector and the bulging at the base cornicles.

Davidson (3 and 4) described two species *flava* and *gillettei* under the genus *Euceraphis*, erected by Walker (13) with *Aphis betulae* Linn. as type of the genus. Unfortunately Walker, as many workers of his day, did not define his genus, but the genotype *betulae* Linn. is a well known species and offered no difficulty in including under *Euceraphis* several closely related species.

Although both species, *flava* and *gillettei* have several characters in common, and typically those of *Euceraphis*, Davidson (4) three years later, after *flava* was described, realized that his *flava* departs in a number of characters from the species correctly belonging to *Euceraphis*, and placed it in the genus *Eucalipterus* erected by Schouteden (8 and 9) with *Aphis tiliae* Linn. as the type. In this he was followed by Essig (5) and Swain (11), showing that they agreed with him in existing generic differences of *flava*.

Since *tiliae* Linn. is co-generic with *onoidis* Kalt., the type of *Therioaphis* Walker, as shown by Baker (2), and Schumacher (10) further showed that *Therioaphis* is a synonym of *Leptopteryx* Zetterstedt with *L. nivalis* Zett. as a type of the genus, it is evident that *Eucalipterus* becomes a synonym of *Leptopteryx* Zett. However, *flava* Davidson can not be included in this genus for it is widely different from the species treated under it. It is much nearer to *Euceraphis*, and yet differs from it in several respects.

The characters of *Euceraphis* are well defined by Baker (2) and need not be repeated here. Baker (1) also gave the key to the American species of *Euceraphis* in which he included *flava*

¹Contribution from the Department of Economic Entomology, Wisconsin Agricultural Experiment Station.

Davidson. From this key it is evident that *flava* differs from the typical *Euceraphis* species by having a distinctly bilobed anal plate.

Oestlund (7) in erecting his *Quippelachnus*, used *gillettei* Davidson as the type of the genus. He doubtless misinterpreted the species. He evidently mistook *gillettei* for *flava*, because the cornicles of *gillettei* are not bulging at the base in the Lachnus-like fashion as the name of his genus indicates. This character is typical of *flava* as illustrated by Davidson (3 and 4) and is shown here (fig. 7).

Takahashi (12) in his recent list of aphid genera correctly placed *Quippelachnus* as a synonym of *Euceraphis*, in so far as *gillettei* Davidson is concerned, for it is quite similar to *betulae* (Linn.) in all of the generic characters.

Both species *flava* and *gillettei* are quite common on *Alnus* in northern Wisconsin as they probably are throughout the northern states and Canada. The writer had the opportunity of collecting them frequently and studying their characters and habits. In addition to his own material, the writer examined the type slides of both *flava* and *gillettei* through the kindness of Mr. W. M. Davidson and the U. S. Bureau of Entomology. While visiting Dr. O. W. Oestlund in 1925, the writer had the opportunity through Oestlund's courtesy to examine his material of both species. At that time Oestlund's attention was called to the possible misinterpretation of species.

It may be of interest to mention here that *gillettei* Davidson is treated by Oestlund (7) as *alnifoliae* (Fitch) under *Euceraphis*; and in a like manner *Myzocallis alnifoliae* (Fitch) he erroneously considers under *Pterocallis alni* (De Geer), as shown by Granovsky (6) after examining Oestlund's material.

The genera of the Callipterini are quite well differentiated and are founded, among other structures, mainly on such characters as the types of cornicles, antennae, sensoria, wing venation, caudae and anal plates.

A careful study of *flava* Davidson reveals that it differs from *Euceraphis* species in a number of generic characters such as the cornicles, sensoria, cauda and anal plate, and deserves an independent position, as was recognized by the several workers mentioned above. In order to remove the already existing and possibly future confusion, it is deemed advisable to propose a new name for *Quippelachnus* Oestlund, which was erected for *flava* characters, but for which *gillettei* was used as the type by error. This new genus, *Oestlundia*, the writer is erecting in honor of Dr. O. W. Oestlund, one of the oldest living aphidologists, whose contributions to the knowledge of aphids, although not many, are of interest and value.

Oestlundiella, new genus.

Body elongated. Antennae of six segments, somewhat longer than the body, provided with subcircular or oval sensoria and a few bristle-like hairs. Sensorium at the base of the unguis small, circular with a few auxiliary sensoria on each side. Antennae placed on distinct, but not large, diverging frontal tubercles. Cornicles truncate, constricted in the middle and placed on broad swollen or bulging bases. Cauda elongated, cordiform and indefinitely knobbed in spear-like shape, with constriction near its distal half. Anal plate distinctly and broadly, but not deeply bilobed. Both, cauda and anal plate, hairy. Forewing with venation normal, media twice branched; stigmal vein present, not deeply curved; hind wings with media and cubitus present. Forms are large, but delicate, living in small colonies and singly. Waxy secretion on legs and body is present. Antennae of oviparous females also bear a few subcircular secondary sensoria.

Genotype, *Euceraphis flava* Davidson.

This genus is closely related to *Euceraphis* and occupies the position between *Calaphis*, *Cepigillettea* and *Euceraphis*.

In the structure of antennae, body form and waxy secretion *Oestlundiella* resembles the genus *Euceraphis*, but it differs from it in that of having its anal plate definitely bilobed, cordate cauda with a broad spear-like constriction, and cornicles placed on broad, swollen bases. All of the species belonging to *Euceraphis* in contrast, have their anal plates usually entire or only very indistinctly imarginate, caudae perceptibly knobbed and cornicles much longer than wide, which are not placed on swollen bases.

The genus *Oestlundiella* approaches *Calaphis* and *Cepigillettea* by subcircular or oval sensoria; notched anal plate and by the presence of sensoria on the antennae of oviparous females. It differs from *Calaphis* by the large cauda in which respect it approaches *Cepigillettea*, although the type of cauda is differently shaped.

The figures depict the type of sensoria of antennal segment III, cornicles, caudae and anal plates of alatae of *betulae* (Linn.) the type of *Euceraphis flava* (Davidson) the type of *Oestlundiella*; and *Euceraphis gillettei* Davidson with which *flava* was confounded.

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EXPLANATION OF DRAWINGS.

Euceraphis betulae (Linn.).

1, Sensoria of antennal segment III; 4, cauda and anal plate; 8, cornicle.

Euceraphis gillettei Davidson.

2, sensoria of antennal segment III; 5, cauda and anal plate; 9, cornicle.

Oestlundiella flava (Davidson).

3, sensoria of antennal segment III; 6, cauda and anal plate; 7, cornicle.

NOTE.—All antennal segments are drawn to the same scale.

All drawings of cornicles, caudae and anal plates are made to the same scale.

All drawings therefore are comparable.

